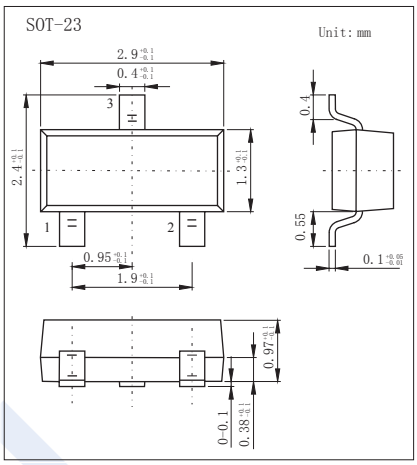
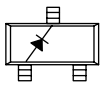
PIN Diodes

SMP1320 Series (KMP1320 Series)

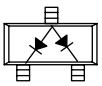


■ Features

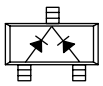
- Low Resistance 0.9Ω
- Low Capacitance 0.3pF
- Packages rated MSL1, 260℃ per JEDEC J-STD-020)



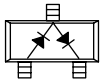
SMP1320-001
SMP1320-001LF
LS = 1.5 nH



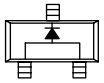
SMP1320-003
SMP1320-003LF
LS = 1.5 nH



SMP1320-004
SMP1320-004LF
LS = 1.5 nH



SMP1320-005
SMP1320-005LF
LS = 1.5 nH



SMP1320-007
SMP1320-007LF
LS = 0.4 nH

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Reverse Voltage	V_R	50	V
Power Dissipation	P_D	250	mW
Junction Temperature	T_J	150	℃
Operating temperature	T_A	-65 to 150	
Storage Temperature range	T_{stg}	-65 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	V_R	I_R= 100 uA	50			V
Forward voltage	V_F	I_F= 10 mA		0.85		
Reverse voltage leakage current	I_R	V_R=50 V			10	uA
Series Resistance	R_S	I=1 mA,F=100 MHz		2		Ω
		I=10 mA,F=100 MHz			0.9	
Capacitance between terminals	C_T	V_R=30 V, f= 1 MHz			0.3	pF
Carrier lifetime	T_I	I_F=10 mA		0.4		us
I region width				8		um

PIN Diodes

SMP1320 Series (KMP1320 Series)

■ Resistance vs Temperature @ 500 MHz

I_F (mA)	R_S @ −55°C (Ω)	R_S @ −15°C (Ω)	R_S @ +25°C (Ω)	R_S @ +65°C (Ω)	R_S @ +100°C (Ω)
0.02	29.6	29.2	30.8	32.0	32.7
0.10	7.2	7.7	8.3	8.8	8.8
0.3	3.4	3.6	3.8	4.0	4.1
0.5	2.5	2.7	2.8	2.9	3.0
1.0	1.7	1.8	1.9	2.0	1.9
10	0.84	0.85	0.76	0.76	0.67
20	0.73	0.73	0.64	0.64	0.56
100	0.59	0.57	0.47	0.48	0.40

■ Marking

NO	SMP1320-001	SMP1320-003	SMP1320-004	SMP1320-005	SMP1320-007
	KMP1320-001	KMP1320-003	KMP1320-004	KMP1320-005	KMP1320-007
Marking	PL1	PL9	PL3	PL2	PLB

NO	SMP1320-001LF	SMP1320-003LF	SMP1320-004LF	SMP1320-005LF	SMP1320-007LF
	KMP1320-001LF	KMP1320-003LF	KMP1320-004LF	KMP1320-005LF	KMP1320-007LF
Marking	RL1	RL9	RL3	RL2	RLB

PIN Diodes

SMP1320 Series (KMP1320 Series)

■ Typical Characterisitics

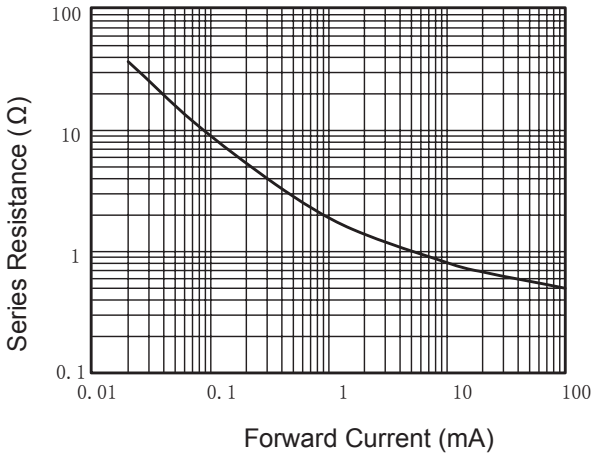


Figure 2. Series Resistance vs Current @ 100 MHz

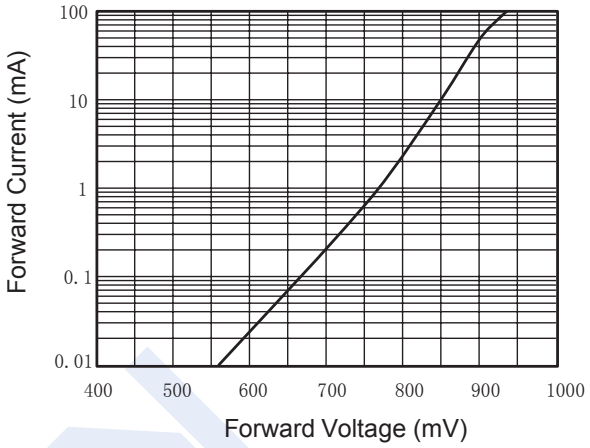


Figure 3. DC Characteristics

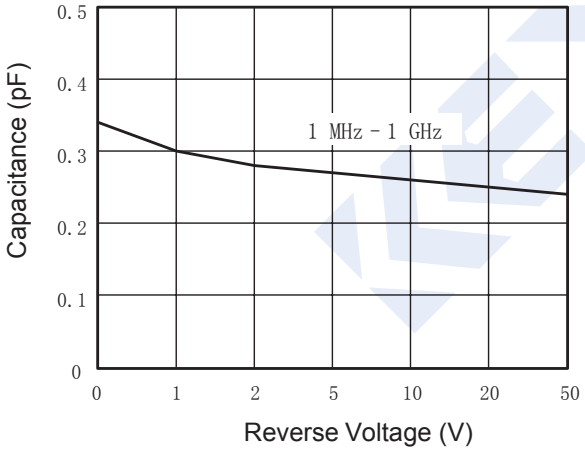


Figure 4. Capacitance vs Reverse Voltage

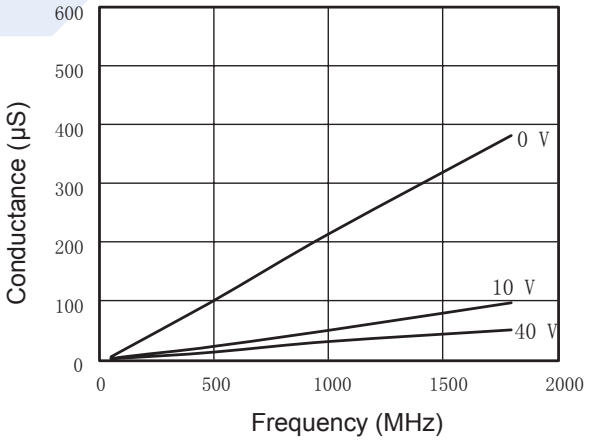


Figure 5. Conductance vs Frequency and Reverse Voltage